**Plane mirror**

1. Place your laser pointer on a lined piece of paper.

2. Hold up the plane mirror so that it is perpendicular to the lines on the

paper.

3. Shine the laser pointer toward the plane mirror along one of the lines on

the paper to demonstrate the normal line.

4. Shine the laser pointer toward a point where a line intersects the mirror

(at an angle other than 90 degrees). Sketch the incident ray & the

reflected ray on your piece of paper. Measure them using a protractor

to confirm that the angle of incidence is equal to the angle of reflection.

5. Look at your image in a plane mirror & describe the characteristics of the

image.

**Concave mirror**

1. Place your laser pointer on a lined piece of paper.

2. Stand up the curved mirror so that the concave surface is facing your

laser pointer, and line up one of the lines on the paper with the centre of

the curve of the mirror. This is your principal axis.

3. Shine the laser pointer toward the mirror along one of the lines on the

paper to find the focal point. Mark it on your paper with a pencil.

Repeat along other lines of the paper.

4. Point the laser pointer through the focal point toward the mirror and

confirm that it reflects back parallel to the principal axis.

5. Plot the centre of curvature (we assume C = 2F) on your paper. Shine

the laser pointer through the centre of curvature to observe the reflection

along a normal line.

6. Look at your image in the concave mirror & describe the characteristics

of the image as you move further away from the mirror.

**Convex mirror**

1. Place your laser pointer on a lined piece of paper.

2. Stand up the curved mirror so that the convex surface is facing your

laser pointer, and line up one of the lines on the paper with the centre of

the curve of the mirror.

3. Shine the laser pointer toward the plane mirror along one of the lines on

the paper. Trace the reflected ray & continue it behind the mirror to find

the focal point, and mark it on your paper with a pencil.

Repeat along other lines of the paper.

4. Plot the centre of curvature (we assume C = 2F) on your paper. Shine

the laser pointer toward the mirror (lining up the incident ray with the

centre of curvature) to observe the reflection along a normal line.